

## REMARKS

### I. RESTRICTION REQUIREMENT

Withdrawal of the product claims 1 to 18 is acknowledged. Prosecution continues with the amended and new method claims 25 to 32 above.

### II. OBVIOUSNESS REJECTION

Method claims 19 to 27 were rejected as obvious under 35 U.S.C. 103 (a) over Flemming, et al, US Patent 5,885,561 (referred to as "Flemming" herein below), taken with Emmerling, US Patent 6,730,290 B2, in view of Yoshida, et al, US Patent 6,649,154 B1 (referred to as "Yoshida" herein below), taken with Garces Garces, US Patent 6,733,790 B1 (referred to as "Garces" herein below), and further in view of Carballada, et al, US Patent 6,585,965 B1 (referred to as "Carballada" herein below).

Method claims 19 to 24 have been canceled, obviating their rejection for obviousness on the aforesaid ground. New method claims 28 to 32 have been filed and the previously pending method claims 25 to 27 have been amended.

The single new independent method claim 28 includes all the method steps of canceled claim 19, except that the applied hair wax composition of step a) of claim 19 includes additional limitations so that the method claimed in claim 28 is distinguished from the cited prior art.

## 1. SUPPORT IN THE DISCLOSURE FOR THE NEW CLAIMS

The applicants' originally filed specification (referred to as the "specification" in the following) fully supports the subject matter of step a) of the new method claim 28. The amount range for water in new claim 28 is disclosed on page 6, line 7, of the specification. The amount range for the monohydric alcohol with 2 to 3 carbon atoms in new claim 28 is disclosed on page 6, lines 19 to 20, of the specification. The amount range for the at least one polyhydric alcohol with 2 to 5 carbon atoms is fully supported by the disclosure on page 6, lines 9 to 12 and lines 20 to 21, of the specification (the USPTO policy in MPEP 2163.05 about changes to concentration ranges by mixing of upper and lower limits from disclosed concentration ranges is noted). The amount range for the emulsifier is supported by the disclosure in line 4 on page 7 of the specification. Nonionic emulsifiers are the preferred emulsifiers according to line 8 of page 7 of the specification. The amount range for the wax is supported by page 8, lines 8 to 9, of the specification. The weight ratio of emulsifier to wax in new claim 28 is the same as in the canceled claim 19.

Step b of new claim 28 is the same as step b of canceled claim 19.

Step c of new claim 28 employs somewhat different wording than step c of canceled claim 19, but it includes substantially the same subject matter. Step c of new claim 28 is supported by page 4, lines 5 to 14, especially by lines 5 to 7, of the specification.

New dependent claim 29 defines the preferred duration of the initial time

interval immediately after application of the hair wax product and is fully supported by the disclosure on page 4, line 7, of the specification.

Claim 30 for preferred alcohols is supported by the disclosure at page 6, line 2, and page 6, line 5, as well as the examples in the specification.

Claim 31 for the hair wax composition with the optional content of hydrophobic oil is supported by page 9, lines 7 to 10, of the specification.

## 2. DISTINGUISHING LIMITATIONS IN NEW METHOD CLAIM 28

The method claimed in new claim 28 is generally characterized by larger required amounts of wax ( $\geq 5$  wt. %) and considerably larger required amounts of emulsifier ( $\geq 10$  wt. %) than the relevant hair treatment compositions disclosed or suggested by the prior art of record. Furthermore the weight ratio range for the ratio of emulsifier to wax is considerably different than that of various prior art references.

Because of these differences, especially the larger amounts of emulsifier, the claimed hair wax composition has better hairstyling properties, especially reduced stickiness and better luster than corresponding compositions of the prior art, especially those with much less emulsifier. Comparative experimental results on pages 14 and 15 of the specification fully support these conclusions.

Because of the foregoing differences and the experimental results on pages 14 and 15 it is respectfully submitted that the above-recited prior art of record used to reject claim 19 does not establish a case of *prima facie* obviousness of new claims 28 to 32 and the amended claims 25 to 27.

### 3. CONTENT OF THE CITED PRIOR ART

In accordance with the analysis procedure in M.P.E.P. 2141 and following in this section the relevant subject matter of the various prior art references is reviewed and summarized.

#### US Patent 5,885,561

Flemming discloses a special combination of wax and oil compounds for use in hair treatment compositions comprising apple wax, orange and/or citric wax, and jojoba oil, which are more easily emulsified and softer. Flemming claims cosmetic compositions of all types containing the special combination of wax and oil ingredients, but does not claim methods of hair treatment or hairstyling.

Flemming exemplifies the use of their wax combination in a great variety of cosmetic compositions including permanent wave compositions, skin treatment compositions such as lip care sticks, and dye compositions, but the only examples of hairstyling compositions are examples 14, 15, and 33 in columns 9 to 14. The exemplary hairstyling compositions of examples 14, 15, and 33 include no emulsifier and less than 1 wt. % of wax.

All the hair treatment exemplary compositions in columns 6 to 14 contain no more than about 1.2 wt. % of wax ingredients and in most cases considerably less than 1 wt %. Also the exemplary hair treatment compositions in columns 6 to 14 of Flemming have an emulsifier or surfactant content that is less than the required 10 wt. % of the hairstyling composition of step a) of the new claim 28.

In contrast, the hair wax compositions of applicants' method claim 28

require a minimum of 5 wt. % wax and 10 wt. % nonionic surfactant in their hairstyling compositions.

Example 32, which was mentioned on page 3 of the Office Action, does disclose a nonrinsible hair care foam containing 0.20 g of a commonly used nonionic surfactant, namely ethoxylated hydrogenated castor oil, but this amount (0.20 wt. %) is much lower than the applicants' lower limit for the surfactant content of the hair wax compositions of step a of claim 28, namely 10 wt. %. Many different nonionic surfactants are preferred emulsifiers in the applicants' hair wax composition. Thus example 32 is not relevant to the claimed emulsifier content.

The disclosures in Flemming regarding hair treatment compositions, such as permanent hair shaping compositions, which are rinsed from the hair after a certain acting time are not relevant to the method claimed in claim 28, because the method of claim 28 cannot include a step of rinsing the hair wax composition from the hair since the rinsing step would destroy the hairstyle. Thus one skilled in the art knows that disclosures of exemplary compositions in Flemming that describe compositions that are rinsed from the hair would not be relevant to the method according to new claim 28.

#### **US Patent 6,730,290**

Emmerling discloses and claims a method of treatment of hair with an aerosol spray composition including at least one wax with a melting point in a range from 40° to 90°C, at least one emulsifier, and at least one propellant (claim 1, abstract).

Emmerling clearly **teaches against** including solvents, such as water and alcohol, in their preparation at column 1, lines 45 to 50.

Emmerling also **teaches against** the much larger amounts of emulsifiers, namely from 10 to 30 percent by weight, in the hair wax composition of step a of claim 28 at column 4, lines 50 to 55.

**US Patent 6,649,154**

Yoshida discloses and claims a hairdressing method (claim 10) in which a composition (claim 1) containing a heat-gelling polymer (preferably curdlan, but see table 1 in column 7) is applied to the hair, the hair is shaped and then the hair is fixed by directing hot air at the hair after application of the composition. Generally the exemplary compositions contain large amounts of water as noted in the Office Action on page 4, and small amount of the curdlan polymer, namely less than 1 wt. %. They can include 20 wt. % or 40 wt. % of ethanol (example 4, column 7, line 20).

Although Yoshida does mention that their hair dressing preparations can be a hair wax at column 5, line 5, the reference does not disclose any exemplary composition containing wax and no examples of wax compounds.

Yoshida does disclose surfactant compounds that can be included in their compositions in column 5, lines 32 to 50, which include nonionic surfactants, but does not disclose any generally concentration range for the surfactant content of their hairdressing preparations. Examples 12, 13, 14, and 19 only contain from about 0.1 to 0.8 wt. % of emulsifier.

Thus Yoshida cannot suggest the applicants' amount range for their

nonionic surfactants in the definition of the hair wax composition of step a) of claim 28, namely 10 to 30 wt. %.

**US Patent 6,733,790**

Garces does not disclose hairstyling or hair shaping compositions. All the examples are other types of compositions, such as conditioners and shower bath compositions, and even include pharmaceutical compositions (column 15, lines 50 to 55). Thus Garces is not relevant to methods of hairstyling, as claimed in claim 28.

Garces discloses a process for making a microcapsule including forming an aqueous matrix by heating an aqueous solution of a gel former, an anionic polymer, and an active principle, which can be a surfactant, and adding the aqueous matrix to a solution of chitosan. These ingredients are entirely different and unrelated to the ingredients of the preparation of step a) of claim 28.

The compositions of Garces do include auxiliaries and additives including thickeners and some surfactants in columns 16 and 17, but there is no amount range disclosed for waxes, only a general amount range for additives in column 17, lines 31 to 37. A general amount range for surfactants is 0.1 to 99 wt. %, preferably 1 to 5 wt. %. The preferred amount is of course much lower than the lower limit of the present claim 28, namely 10 wt. %.

**US 6,585,965**

The improved hair care composition of Carballada includes a water-soluble polyalkylene glycol, a film-forming polymer and a liquid carrier (claims 1 to 2; column 2, lines 36 to 61). The liquid carrier includes preferably at least 50 %

water together with organic solvents such as alcohols (column 7, lines 4 to 17).

The primary difference between the hair care cream compositions of Carballada and the claimed hair wax compositions of the present invention is the difference between the amounts of emulsifier or surfactant in the respective compositions. While the hair wax composition of step a of new method claim 28 includes from 10 to 30 wt. % of at least one nonionic surfactant, the exemplary compositions of Carballada in Tables I to V contain amounts of surfactants that are well below the lower limit of 10 wt. % for the claimed invention. Surfactants are disclosed as optional materials in column 14, lines 25 to 37, of Carballada, but there is no concentration range that is given for the surfactant content, as such. The recited surfactants (Isosteareth-20 and Undeceth-9) in the exemplary compositions in Tables I to V are only present in amounts from 0.4 to 0.8 wt. %. Also note the limit on the amount of surfactant in the added silicone emulsion according to column 8, lines 4 to 9, which effectively results in an additional maximum amount of 1 wt. % of surfactant in various examples.

Another important difference is the weight ratio of emulsifier/wax, which is above 1.0 for the hair wax composition of step a of new claim 28, but between 0.025 and 0.08 for exemplary compositions of Carballada that include wax. The wax ingredients in the case of Carballada are PEG-8 and PEG-12 styling agents (ingredient a of claim 1), which are described in columns 4 and 5 of Carballada.



#### 4. REASONS THAT CLAIM 28 SHOULD NOT BE REJECTED AS OBVIOUS OVER THE PRIOR ART OF RECORD

Patentable cosmetic compositions are often novel combinations of known compounds selected from well-known classes of cosmetic ingredients. Thus it is not surprising that all the ingredients and classes of ingredients of the hair wax compositions of step a) of claim 28 are known individually and are disclosed as ingredients of different types of known compositions disclosed in existing prior art US Patents.

The inventor of novel and unobvious compositions selects a novel combination of known ingredients and/or known classes of ingredients in novel amounts to arrive at patentable cosmetic compositions that have new or improved properties in comparison to the known compositions of the same type.

Thus with respect to the motivational statement on pages 5 to 6 of the Office Action the issue is not whether each ingredient of the hair wax composition of step a of claim 23 is disclosed individually somewhere in the five different U.S. Patent References as an ingredient of their respective different cosmetic compositions or even their wax-containing compositions, as implied by lines 4 to 5 of the paragraph bridging pages 5 and 6 of the Office Action, which state that the prior art references teach each ingredient and its usage.

The issue regarding obviousness is whether or not the novel and inventive combination of ingredients in the novel amounts of step a of claim 28 is obvious to one of ordinary skill in the art from the combined content of the respective five

US Patent references. Alternatively the issue regarding obviousness is whether or not one of ordinary skill in the cosmetic arts would be motivated to make the hair wax composition as defined in step a of method claim 28 (M.P.E.P. 2141 and following).

Applicants respectfully submit that the combined teachings of the five prior art references would not lead one of ordinary skill in the cosmetic arts to the novel combination of ingredients in the recited novel amounts of step a) of new claim 28. Because of the additional concentration range limitations in newly filed claim 28 the five references no longer establish a case of *prima facie* obviousness. As shown by the examples section of the applicants' specification on pages 15 to 17 comparatively large amounts of both wax ( $\geq 5$  wt. %) and surfactant ( $\geq 10$  wt. %) and their weight ratio limitation ( $\geq 1.0$ ) are critical to obtain the desired hair styling properties according to the present invention.

One skilled in the art would find that the five prior art references do suggest a hair wax composition, but not the hair wax or hair styling composition with all critical limitations of the new claim 28 that are necessary to obtain the improved properties. It is well established that the references must disclose or suggest all the limitations of a claimed invention in order to establish a case of *prima facie* obviousness under 35 U.S.C. 103 (a). For example, see M.P.E.P. 2144.03.

But also because of the additional limitations the above-mentioned five prior art references do not establish a case of *prima facie* obviousness of the new claim 28.

### **A. WHAT THE PRIOR ART DOES NOT SUGGEST OR MOTIVATE**

Concentration range limitations in new method claim 28 are critical distinguishing limitations that help to avoid a case of prima facie obviousness of the subject matter of new claim 28.

As noted above in the section on content, Flemming discloses a particular specific combination of special waxes and oils that can be used in almost any type of cosmetic composition, including for example lip care compositions and skin care compositions.

No one skilled in the cosmetic arts would find that specific disclosures of the amounts and amount ranges of their special wax combination in skin care compositions and lip care compositions suggest anything regarding how much wax should be included in hairstyling compositions or hair wax compositions for hair styling (note preamble of claim 28) because the ingredients and amounts in the different types of compositions are entirely different.

Furthermore disclosures of broad concentration ranges for various waxes, such as those in column 2, lines 8 to 15, of Flemming cannot be regarded suggesting the same concentration ranges for the "at least one wax" in applicants' hairstyling composition because these disclosures are applicable to all types of cosmetic compositions including skin treatment compositions. One skilled in the cosmetic arts would understand that such broad ranges would not be used in aqueous hair wax compositions containing the amounts of water required in the composition of step a of claim 28. Of course solid waxy hair compositions could include nearly 100 % wax compounds.

A general principle from the M.P.E.P., which is relevant here, is that a broad generic disclosure in the prior art references does not make a specific disclosure, which includes particular limitations like the concentration range and weight ratio limitations of claim 28, obvious.

Column 3, lines 63 to 67, of Flemming teach that hair wax and hair gel compositions of their invention can include from 1 to 99.8 wt. % of their wax combination. In contrast, claim 28 requires from 5 to 30 weight % of at least one wax. Thus Flemming does not teach or suggest a hair wax composition with the narrower more specific concentration range limitation for wax ingredients. Furthermore the hair wax compositions in examples 14, 15, and 33 include less than 1 % wax.

Column 5, line 57, of Flemming teach that their cosmetic compositions can contain from 0.1 to 30 wt. % of a surfactant, but this disclosure is not specific for hair wax compositions or hair styling compositions and also is for cosmetic compositions that are shampoos or body cleansing compositions, which necessarily must contain large amounts of surfactants. In contrast the large amount range of 10 to 30 wt. % for nonionic emulsifiers in the hair wax composition of step a of claim 28 is surprising for hair wax or hairstyling compositions. Furthermore an amount range of 0.1 to 30 wt. % for a surfactant would not suggest an amount range of 10 to 30 wt. % (the generic does not suggest the specific).

In addition the amount range of 0.1 to 30 wt. % is not disclosed for hair wax or hairstyling compositions specifically according to Flemming but only for

cosmetic compositions in general. Thus to determine what Flemming would motivate one skilled in the cosmetic arts to do regarding the concentration range for surfactants or emulsifiers in hairstyling or hair wax compositions one must consider the examples of these types of cosmetic compositions provided in Flemming. The non-permanent hair styling compositions of examples 14, 15, and 33 include no emulsifier or surfactant! Furthermore the disclosures of exemplary hair treatment compositions **of any kind** in columns 6 to 14 of Flemming have an emulsifier or surfactant content that is considerably less than the required 10 wt. % of the hairstyling composition of step a) of the new claim 28, usually of the order of only a few percent.

All the hair treatment exemplary compositions in columns 6 to 14 contain no more than about 1.2 wt. % of wax ingredients and in most cases considerably less than 1 wt %.

Thus it is respectfully submitted that Flemming alone only discloses or suggests aqueous hair wax compositions with amounts of water as claimed in step a of new method claim 28 that include only a few percent of wax, in contrast to the required minimum of 5 wt. % of wax according to step a of claim 28.

It is also respectfully submitted that Flemming by itself only suggests amounts of surfactant of a few percent in contrast to the required minimum of 10 wt. % according to step a of claim 28 in **any** hair treatment composition.

Turning to the secondary prior art references, one skilled in the cosmetic arts would not be motivated by the disclosures in Emmerling to modify the disclosures of Flemming regarding aqueous hair wax compositions with the

claimed water and alcohol content according to step a of new method claim 28, because Emmerling teaches compositions that do not include either water or alcohol. Emmerling teaches a surfactant content that is from 0.1 to 10 wt. % at most, but since their non-aqueous aerosol compositions have entirely different properties, one skilled in the art would not use the disclosures regarding amounts of surfactants in the compositions of Emmerling to suggest surfactant amounts for Flemming's hair treatment compositions, which generally contain large amounts of water.

Furthermore the upper limit of the broadest amount range of Emmerling for surfactants only just touches the lower limit for surfactants of 10 wt. % according to step a) of claim 28. Thus amounts of surfactants are generally much lower even in their unrelated non-aqueous aerosol hair wax compositions.

Yoshida does disclose surfactant compounds that can be included in their hairdressing compositions in column 5, lines 32 to 50, which include nonionic surfactants, but does not disclose any concentration range for the surfactant content of their hairdressing preparations. Examples 12, 13, 14, and 19 only contain from about 0.1 to 0.8 wt. % of emulsifier.

Thus Yoshida does not motivate one skilled in the art to modify the disclosures of Flemming regarding the applicants' amount range for nonionic surfactants in the definition of the hair wax composition of step a) of claim 28, namely 10 to 30 wt. %.

Garces does not disclose hairstyling or hair shaping compositions or hair wax compositions. All the examples are other types of cosmetic compositions,

such as conditioners and shower bath compositions, and even include pharmaceutical compositions (column 15, lines 50 to 55). Thus Garces is not relevant to methods of hairstyling, as claimed in claim 28, and would not suggest the critical surfactant concentration range of step a of method claim 28.

The compositions of Garces can include surfactants, among other auxiliary compounds, in an amount of 0.1 to 99 wt. %, preferably 1 to 5 wt. %, according to the disclosure in column 17. The general concentration range of 0.1 to 99 wt. % certainly would not suggest the more limited range of from 10 to 30 wt. % and the limitation to nonionic surfactants because such a broad generic disclosure would not suggest the more limited range of step a of claim 28. The preferred amount range of 1 to 5 % of course is much lower and does not overlap the range according to step a of claim 28.

The primary difference between the hair care cream compositions of Carballada and the claimed hair wax compositions of the present invention is the difference between the amounts of emulsifier or surfactant in the respective compositions. While the hair wax composition of step a of new method claim 28 includes from 10 to 30 wt. % of at least one nonionic surfactant, the exemplary compositions of Carballada in Tables I to V contain amounts of surfactants that are well below the lower limit of 10 wt. % for the claimed invention. Surfactants are disclosed as optional materials in column 14, lines 25 to 37, of Carballada, but there is no concentration range that is given for the surfactant content, as such. The recited surfactants (Isosteareth-20 and Undeceth-9) in the exemplary compositions in Tables I to V are only present in amounts from 0.4 to 0.8 wt. %.

Also note the limit on the amount of surfactant in the added silicone emulsion according to column 8, lines 4 to 9, which effectively results in an additional maximum amount of 1 wt. % of surfactant in various examples.

Another important difference is the weight ratio of emulsifier/wax, which is above 1.0 for the hair wax composition of step a of new claim 28, but between 0.025 and 0.08 for exemplary compositions of Carballada that include wax. The wax ingredients in the case of Carballada are PEG-8 and PEG-12 styling agents (ingredient a of claim 1), which are described in columns 4 and 5 of Carballada.

It is especially important to remember that the statute requires that the source of the suggestion to modify the primary reference or the motivation to combine the prior art references cannot originate in the applicants' specification. For example, US judicial opinions have held that:

"As in all determinations under 35 U.S.C. 103, the decision-maker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selected elements from references to fill the gaps". *In re Gorman*, 18 U.S.P.Q.2d 1885 (Fed. Cir. 1991).

The term "hindsight reconstruction" here means that limitations of the claimed invention are not disclosed or suggested by the prior art references, but are only disclosed in the applicants' specification. Applicants understand that the reasoning on which a rejection under 35 U.S.C. 103 (a) necessarily takes place after the specification and claims of the applicants have been studied. However the aforesaid legal principle prohibits reading limitations that only the applicants have disclosed in their specification into the disclosures of the prior art when



those disclosures were not present in the prior art.

It is respectfully submitted that the secondary references would not motivate one skilled in the art to prepare aqueous hair wax compositions with improved hair styling properties that have the combination of critical concentration range limitations and the weight ratio limitation of step a) of claim 28. Applicants have provided experimental results that show that this combination of limitations and features leads to improved hairstyling results for the claimed method of new claim 28. These results appear on pages 15 to 17 of applicants' specification.

It is respectfully submitted that there is a lack of motivation or suggestion for one of ordinary skill in the cosmetic arts to arrive at the hair wax composition of step e) of method claim 28 from the five prior art references mentioned above and that these five prior art references do not establish a case of *prima facie* obviousness of the new claim 28 with the additional limitations in step a.

## **B. TEACHING AWAY FROM THE CLAIMED INVENTION**

It is well established that a reference that teaches against the claimed invention should not be used alone or together with any other prior art reference to reject the claimed invention under 35 U.S.C. 103 (a). See MPEP 2145 X. and also the Federal Circuit Court of Appeals has said:

"In determining whether such a suggestion [of obviousness] can fairly be gleaned from the prior art...It is indeed pertinent that these references teach against the present invention. Evidence that supports, rather than

negates, patentability must be fairly considered." *In re Dow Chemical Co.*, 837 F.2d 469,473, 5 U.S.P.Q.2d 1529, 1532 (Fed.Cir. 1988)

In the case of the present invention Emmerling contains clear teaching against the present invention in column 1, lines 39 to 50, especially lines 47 to 49, where it states that sprays [that contain wax as in the case of Emmerling] and solvents, such as alcohol, do not have good application properties because "additional styling properties may only be achieved at the cost of a significantly worse shine (luster) and feel". In contrast applicants' tested hair wax compositions provide good styling properties but also good feel as reported on page 15 for specific examples of applicants' specification and on page 14, lines 1 to 5 in general.

Emmerling contains teaching against including the amounts of lower alcohol in hair wax compositions and reports compositions that include neither water nor lower alcohols. Thus Emmerling should not be combined with other prior art references to establish a case of *prima facie* obviousness.

As noted above in the section on content of the prior art references, Yoshida teaches away from the greater than 10 wt. % of surfactant in the applicants' hair wax composition of step a) of claim 28. Their relevant exemplary compositions contain no more than 1 wt % surfactant. There is not disclosure of a general amount range for surfactant ingredients in their compositions, although column 5 indicates that some nonionic surfactants can be included in their compositions.

Thus Yoshida thus should not be combined with any other prior art

references because of the teaching in Yoshida against including large amounts of surfactant as in step a of claim 28.

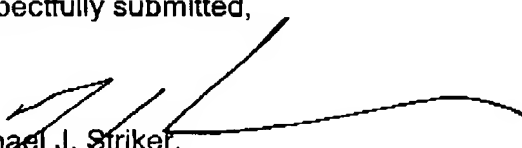
For the foregoing reasons withdrawal of the rejection of amended dependent claims 25 to 27 as obvious under 35 U.S.C. 103 (a) over Flemming, et al, taken with Emmerling, in view of Yoshida, et al, taken with Garces Garces, and further in view of Carballada, et al, is respectfully requested.

Furthermore it is respectfully submitted that new method claims 28 to 32 should not be rejected as obvious under 35 U.S.C. 103 (a) over Flemming, et al, taken with Emmerling, in view of Yoshida, et al, taken with Garces Garces, and further in view of Carballada, et al.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549 4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,



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